**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC D/B/A BRAZOS LICENSING AND DEVELOPMENT,
 	
    Plaintiff,
 	
    v.
 	
ARISTA NETWORKS, INC.,
 	
    Defendant.
	Civil Action No. 6:20-cv-1083-ADA
	
	JURY TRIAL DEMANDED

**DECLARATION OF DR. JOHN R. BLACK IN SUPPORT OF
ARISTA NETWORKS, INC.'S REPLY CLAIM CONSTRUCTION BRIEF**

I, John R. Black, declare as follows:

I.   INTRODUCTION AND QUALIFICATIONS

1.   I have been retained on behalf of Arista Networks, Inc. ("Arista") in the above-captioned matter to provide this declaration to respond to arguments and opinions raised in Plaintiff WSOU's Responsive Claim Construction Brief (herein, "Resp.") and Dr. Polish's supporting declaration (herein, "Polish Decl."), and to supplement my previous declaration of July 26, 2021 (Dkt. 28-13) (herein, "Black Decl.") concerning technical subject matter relevant to claim construction for U.S. Patent No. 7,409,715 (the "'715 patent"), U.S. Patent No. 8,472,447 (the "'447 patent"), and U.S. Patent No. 9,450,884 (the "'884 patent") (collectively, the "Asserted Patents").

2.   My previous declaration sets forth my background and qualifications, which I incorporate herein by reference. My opinions expressed herein are based on my review of WSOU's Responsive Claim Construction Brief (Dkt. 34), Dr. Polish's supporting declaration (Dkt. 34-1), the exhibits accompanying WSOU's brief, the materials considered in providing my first declaration, any documentation discussed below, as well as my review and analysis of certain information obtained in connection with my work on this matter, together with my training, education, and experience. *See* Black Decl. at ¶¶ 13-14. The opinions expressed herein are my own. I have personal knowledge of the facts stated in this declaration and could testify competently to them if asked to do so.

3.   As stated in my previous declaration, I understand that if a claim term does not use "means," there is a presumption that means-plus-function treatment does not apply. I understand that in determining whether a claim term should be treated as a means-plus-function term, the essential inquiry is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. I understand that means-

plus-function treatment applies when the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function. I understand that a claim term may also be indefinite if the claim, read in light of the specification and the prosecution history, fails to inform, with reasonable certainty, those skilled in the art about the scope of the invention.

II.   THE '447 PATENT

A. "Chassis Management Module"

4.   I understand that WSOU provided its Responsive Brief and the Polish Declaration to respond to Arista's arguments in Arista's Opening Brief and my opinions in support. I understand that, with respect to the "chassis management module" term, WSOU and Dr. Polish assert that the term "has a well-understood meaning in the art with known structure." (Resp. at 8; *see* Polish Decl. at ¶ 47.) They attempt to support their position by pointing to the specification, (specifically '447 patent at 23:25-51), the prosecution history, and extrinsic evidence. (*See* Resp. at 8-15; Polish Decl. at ¶¶ 47-50.) They assert that because of this purported well-understood meaning as the name for a structure, the term should not be treated as a means-plus-function term. As laid out in my previous declaration, I disagree with this conclusion. *See* Black Decl. ¶¶ 40-55. Below, I address the points raised by WSOU and Dr. Polish and conclude that "chassis management module" should be construed as a means-plus-function term.

1.   Specification

5.   WSOU and Dr. Polish both point to the '447 patent 23:25-51 and assert that this defines "chassis management module" in terms of structure. (*See* Resp. at 8-9; Polish Decl. at ¶ 47.) They assert that this part of the specification shows that "chassis management module" has "a sufficiently definite meaning as the name for structure" and is "a well-known term of art." (Resp. at 9; Polish Decl. at ¶ 47.) But as I explained in my previous declaration, the opposite is

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true. *See* Black Decl. at ¶ 49. The description in column 23 suggests that the "chassis management module" could be almost anything. It says the "chassis management module" includes "any device that manipulates signals (analog and/or digital)" "to perform the steps and/or functions described" in the specification. '447 patent at 23:25-51. Listing examples of processing devices, and examples of forms in which functions may be carried out, does not provide a definite structure for the claimed "chassis management module." The examples provided simply enumerate the plethora of ways in which a device may provide desired functionality. This is not sufficiently definite structure or evidence of "a well-known term of art." And it certainly does not explain structure sufficient to carry out the claimed functions. It simply tells the POSA reader that the "chassis management module" is hardware and/or software that performs the functions described in the specification. In other words, it is any black box of components that together provide the desired functionality.

6.   As I noted in my previous declaration (*see* Black Decl. at ¶ 46), the '447 patent reaffirms this black box nature with respect to "modules" elsewhere in the specification. *See* '447 patent at 26:61-67 ("One of average skill in the art will also recognize that the functional building blocks, and other illustrative blocks, ***modules*** and components herein, can be implemented as illustrated or by one or multiple discrete components, networks, systems, databases or processing ***modules*** executing appropriate software and the like or any combination thereof." (emphasis added)). Neither WSOU nor Dr. Polish address this part of the specification, which a POSA would understand to mean that the various "modules" described in the patent, including the "chassis management module," may be formed of any hardware and/or software. This further evidences that, in the context of the '447 patent, "modules" and the "chassis management module" are not

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defined by any sufficiently definite structure, and certainly none that is sufficient for performing the claimed functions.

2.   Prosecution History

7.   WSOU and Dr. Polish next argue that the prosecution history shows that "chassis management module" refers to a "particular structure" and "was a well-known term with a known structure." (Resp. at 10; Polish Decl. at ¶ 48.) In particular, they point to the discussion of the Weyman reference. The examiner rejected a number of the pending claims as obvious over "Salam et al. (US 2010/0020680, 'Salam') in view of Weyman et al. (US 2005/0041665, 'Weyman')." (Resp. Ex. 4 at WSOU-ARISTA0000038.)   The examiner stated that, among other things, Weyman discloses:

> - a chassis management module (a snooper module, not shown, see ¶.104) for receiving the snooping information via at least the external ports (receiving snooping information to determine which user ports connect to a client of a particular multicast stream, see ¶.104), storing the snooping information within the database (forwarding database allowing learning opportunity presented by the additional synchronization by snooping action, see ¶.47 and ¶.6) and sharing the snooping information substantially in real-time with the remote aggregation switch via the VFL (a master unit in the fabric to run routing protocols and for the other units to synchronize their operation by the action of 'snooping', see ¶.6).
>
> Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply the database maintaining IP multicast snooping information and a snooper module as a chassis management module as taught by Weyman into the system of Salam, so that it provides a way of determining which user ports connect to a client of a particular multicast stream (Weyman, see ¶.104).

(Resp. Ex. 4 at WSOU-ARISTA0000039.)   WSOU and Dr. Polish appear to assert that the

reference to "snooper module" indicates that "chassis management module" was a known name

for structure. (*See* Resp. at 10; Polish Decl. at ¶ 48.) But nowhere does the examiner draw that

conclusion, and I see nothing that would lead a POSA reviewing the prosecution history to that

conclusion either. This is made even more clear by reviewing Weyman itself, and the examiner's

cited disclosures.

        8.   Weyman (U.S. Pat. Pub. No. 2005/0041665, Reply Ex. 12) is titled "System and

Method for Distributed Multicast Routing." The Abstract provides:

> A distributed router composed of individual units connected by links
> in a routing fabric which appears to be a single network entity routes
> multicast packets by bridging to the final unit in the fabric. At the
> final unit the packet is replicated as necessary and routed. The
> scheme avoids multiple transmission of the same packet across the
> fabric.

Weyman at Abstract. While the examiner referred to a "snooper module" in the rejection, the

examiner expressly recognized that no such module was shown in Weyman. The examiner pointed

to paragraph 104 of Weyman for support. Paragraph 104 is set out below:

> [0104] Many modern bridges have IGMP (internet group
> management protocol) *snooping functionality* that controls the
> bridge's forwarding of IP multicast address traffic within a VLAN.
> It is preferable, in order to control traffic within a VLAN, that a
> Vbridge monitors the IGMP traffic in order to determine which user
> ports connect to a client of a particular multicast stream.
> Accordingly *the snooper* must also determine which user ports are
> connected to other multicast routers. The Vbridge must then
> forward each multicast stream to each user port that connects either
> to another multicast router or to a client of that stream, and the
> Vbridge should filter the multicast stream from all other user ports.

Weyman at ¶ [0104] (emphasis added).[1]   Reading this passage, it is clear to a POSA that the examiner was referring to the "snooping functionality" described in Weyman as matching the "receiving" function of the claimed "chassis management module."   I see no reference in Weyman to a "snooping module" or to any specific "module" at all, and certainly nothing that would indicate that "chassis management module" was a well-understood term in the art or a name for structure as asserted by WSOU and Dr. Polish.

9.   Instead, Weyman describes that the IGMP "snooping functionality" is part of the "control plane."   *See, e.g.*, Weyman at ¶¶ [0025], [0115], [0139].   As Weyman describes, "the control plane relates to the 'overhead' activities of establishing the topology of the network in which the unit is deployed," including various "protocol entities."   *Id.* at ¶ [0025].   A POSA would understand the "control plane" to typically include software and software processes that implement various protocols in connection with network topology management.   This is consistent with descriptions in the '447 patent as well.   *See, e.g.*, '447 patent at 13:43-48 (referring to information learned through a "control plane process"), 14:59-65 (referring to "control module management software"), 19:32-50 (describing "IPMS (IP Multicast Snooping) process" running on "chassis management module").

10.   As noted in my previous declaration, the term "module" as used in the art to which the '447 patent pertains could refer to either hardware, software, or a combination of both.[2]   *See* Black Decl. at ¶ 46.   Moreover, the '447 patent itself refers to "modules" as hardware and/or software.   *See* '447 patent at 26:61-67.   Thus, the examiner likely used the term "snooper module"

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[1] I note that this description from Weyman is similar to the description of IGMP snooping provided in the '447 patent itself.   *See* Black Decl. at ¶ 34 (quoting '447 patent at 2:62-3:5); *see also* Black Decl. at ¶¶ 59-60 (citing and quoting portions of the '447 patent).

[2] I note that neither WSOU nor Dr. Polish challenged or otherwise disagreed with this opinion.

in a manner consistent without how "module" is used in the art and in the patent itself. It refers to functionality.

3.   Extrinsic Evidence

11.   Next, WSOU and Dr. Polish cite a number of pieces of extrinsic evidence that they assert "proves beyond doubt that 'chassis management module' 'has an understood meaning in the art' and therefore 'recites sufficient structure.'" (Resp. at 11-14; Polish Decl. at ¶¶ 49-50.) I reviewed and addressed much of this extrinsic evidence in connection with my previous declaration. *See* Black Decl. at ¶¶ 50-54. I understand that WSOU produced additional extrinsic evidence after I submitted my previous declaration. Many of the new pieces of evidence describe the same systems as the evidence I previously reviewed. The new pieces of extrinsic evidence do not change my previous opinions.

12.   As noted in my previous declaration, while a handful of companies may have used the same term to refer to similar functional blocks, this does not demonstrate that the term "chassis management module" on its own connotes sufficiently definite structure or that it would be a meaningful term to a POSA at the time of the patent's filing. Black Decl. at ¶ 50. For example, in WSOU Exhibits 5, 6, and 7, which purport to show that physical items that include "chassis management module" in the title can be purchased, there is nothing that would indicate any commonality between these devices to evidence a sufficiently definite structure associated with the name "chassis management module." For example, from the photographs in WSOU Exhibits 5 and 6,[3] different form factors are apparent, and Exhibit 5 appears to have a variety of ports that do not appear in Exhibit 6. From these documents, these appear to be entirely different structures

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[3] This assumes that the photographs are even representative. I note that Exhibit 5 appears to indicate that the "Image may differ from the…" likely ending with "actual product" or similar. And Exhibit 6 notes that the item has been refurbished.

that appear to perform different functions that just happened to receive the same marketing name. Moreover, that such items can be purchased now does not seem relevant to informing what a POSA would have thought about the term in the '447 patent at the time of its filing, which I understand is the relevant timeframe.

13.   WSOU Exhibits 9, 10, and 11 relate to OmniSwitch platforms from Alcatel. But each provides only basic information about any "chassis management module," and certainly not enough to discern whether they could perform the functions of the claimed "chassis management module."   Instead, reference is made to things like power management and temperature management, similar to extrinsic evidence I addressed in my previous declaration. (*See, e.g.*, Resp. Ex. 9 at WSOU-ARISTA00001747.)   Thus, these do not evidence that the term "chassis management module" would connote sufficient structure for performing the claimed functions.

14.   WSOU Exhibits 12, 13, and 14 are U.S. Patents that state they were assigned to Intel and Dell. Exhibit 12 explains that its "chassis management module," for example, "may monitor, control, and ensure proper operation of the modular platform" and "may be responsible for monitoring the health of the system, report issues, and take corrective actions as needed, such as power cycling, notification of fan or power module failure and the like." (Resp. Ex. 12 at 2:1-5.) Exhibit 13 explains that its "chassis management module," for example, "manages access to the shared resources [like storage, power supply, cooling/ventilation system, etc.] between the server blades." (Resp. Ex. 13 at 2:65-3:7.) And Exhibit 14 explains that its "chassis management module," for example, stores user information and allows "an administrator" "to add or delete a user" for the system. (Resp. Ex. 14 at 2:37-49.) Thus, despite the common name "chassis management module," the described "modules" perform different functions; namely monitoring, resource access management, and user access, respectively. This evidence makes clear that the

term "chassis management module" does not have a well-understood meaning or even a well-defined function associated to it, let alone a sufficiently definite structure, because it may refer to providing any number of different functions depending on the vendor, which may require any number of different structures. Moreover, Exhibit 13 also notes that its "chassis management module" "may be implemented by a management agent that may or may not necessarily reside on a separate module." (Resp. Ex. 13 at 3:18-21.) This further confirms that there is no sufficiently definite structure associated with the term "chassis management module," because this is another instance involving hardware and/or software that provides associated functions. To the extent there is any commonality to these "modules," a POSA may group these as performing "chassis management" functions (*see* Black Decl. at ¶¶ 52-53), but not the types of functions performed by the claimed "chassis management module." As such, these provide no indication that the phrase "chassis management module" connotes sufficient structure for performing those and other claimed functions.

15.   That the phrase "chassis management module" is generic can also be shown with additional extrinsic evidence. As just one example, Arista Exhibit 15 shows that BMW included a "chassis management module" in vehicles in at least the 2010-2013 timeframe. While Exhibit 15 does not explain what BMW's "chassis management module" did (just like much of WSOU's extrinsic evidence does not), it is reasonable to assume that it did not provide network switch functionality. Yet Exhibit 15 is comparable to WSOU's and Dr. Polish's indiscriminate citation to instances of "chassis management module" without regard for the actual structure and functionality of those "modules." Exhibit 15 also shows that various companies used the term simply to refer to any module that provided some form of generic "chassis management" functions, which are unrelated to the claimed functions. *See* Black Decl. at ¶ 47. The term does not bestow

a sufficiently definite structural meaning in the relevant art to a POSA, nor does it connote a sufficient structure for performing the claimed functions of the "chassis management module" in the '447 patent.

16.   As I noted in my previous declaration, none of the extrinsic evidence I previously reviewed showed that any of WSOU's "chassis management modules" performed functions like handling of snooping information, building of forwarding vectors, or determining and sharing multicast indices, all of which are claimed functions of the "chassis management module"; nor would a POSA associate the claimed functions with "chassis management" functions. Black Decl. at ¶¶ 52-54. WSOU's new extrinsic evidence does not change that, as there is similarly no evidence that any of WSOU's "chassis management modules" could perform the claimed functions. Therefore, even if "chassis management module" connoted some structure to a POSA— and I do not think it does—the extrinsic evidence confirms that a POSA would not understand it to be capable of performing the claimed functions and therefore is not sufficient structure.

17.   That these "chassis management modules" do not perform functions like those claimed also makes sense because almost all of WSOU's extrinsic evidence relates primarily to server systems, and not switch systems, which are the subject of the '447 patent. *See, e.g.*, '447 patent at 1:25-30, 2:58-3:13, all claims (referring to "aggregation switch"). This is further reason why the extrinsic evidence provided by WSOU and Dr. Polish is not indicative of the meaning of the term "chassis management module" in the '447 patent. Indeed, the evidence provided by WSOU and Dr. Polish further confirms my opinion that the term "chassis management module" is used by various vendors and authors to describe a wide variety of products and/or modules, performing different functions (monitoring, cooling, configuring, etc.), and many are not even

directed to network switches or routers; certainly none of these references discloses structure corresponding to the '447 patent's list of claimed functions for "chassis management module."

18.   I also note that, while WSOU and Dr. Polish were able to identify physical devices that happen to be called "chassis management modules," as described above in connection with the specification, the '447 patent makes clear that the "chassis management module" may simply be software running on a processing device. Indeed, the specification even equates the "chassis management module" with a "control plane process," indicating a pure software implementation. '447 patent at 13:43-47 ("learned through distribution of configuration information by ***the CMM 150 module or other control plane process***" (emphasis added)).

19.   I also reiterate from my previous declaration that the term "chassis management module" did not appear in any of the technical dictionaries I reviewed. *See* Black Decl. at ¶ 45. I note that WSOU and Dr. Polish did not address this, despite asserting that "chassis management module" has a well-known meaning.

20.   Finally, I noted in my previous declaration that WSOU had not identified what it believes to be the plain and ordinary meaning of "chassis management module." Despite providing its brief, WSOU still has not done so. Dr. Polish likewise provides no insight into what he thinks the term means. He only states that a POSA "would apply a plain and ordinary meaning to it." Polish Decl. ¶¶ 45, 52. That WSOU and Dr. Polish cannot even explain what the plain and ordinary meaning is indicates to me that there is no well-understood meaning in the art, and that a construction of "plain and ordinary meaning" would not allow a POSA to understand the scope of the claims with reasonable certainty, in light of the intrinsic evidence.

21.   In my previous declaration, I provided opinions as to why the specification fails to provide adequate corresponding structure for the claimed functions of the "chassis management

module." *See* Black Decl. at ¶¶ 56-71. WSOU and Dr. Polish have not addressed any of these

opinions. Should they be permitted to provide a response at a later date, I reserve the right to

respond.

I declare under penalty of perjury of the laws of the United States that the foregoing is

true and correct. Executed in Boulder, Colorado.

Dated:_Aug 25, 2021_

John R. Black, Ph.D.